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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,016

11/19/2003

Khosro Shamsaifar

WJT08-0052  
(JSF001-0001)

6719

7590

12/15/2006

EXAMINER

TRAN, PABLO N

William J Tucker  
14431 Goliad Drive  
Box #8  
Malakoff, TX 75148

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/717,016	<b>Applicant(s)</b> SHAMSAIFAR, KHOSRO	
	<b>Examiner</b> Pablo N. Tran	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.  
4a) Of the above claim(s) 7-15 and 22 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6, 16-21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 and 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eidson et al. (6,529,716) in view of Porambo et al. (5,280,638) and further in view of Ala-Kojola (5,298,873).

As per claims 1 and 16, Eidson et al. disclosed a tunable power amplifier having at least one input matching circuit (fig. 2/item Matching Elements) receiving an RF signal from an RF input and creating a first output RF signal, a first amplifier (fig. 2/no. 20) receiving said first output RF signal from said at least one input matching circuit and creating a second output signal, said second output signal providing input for at least one inter-stage matching circuit (fig. 2), said at least one inter-stage matching circuit creating a third output signal, a second amplifier (fig. 2/no. 22) receiving said third output signal and creating a fourth output signal, and an output matching circuit (fig. 2) receiving said fourth output signal and generating an RF output signal; and an embedded controller (fig. 2/item Bias Control, col. 4/ln. 57-col. 5/ln. 15) associated with

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said input matching circuit, inter-stage matching circuit and output matching circuit, for frequency tuning control.

Eidson et al. teach such matching elements (fig. 2) but not explicitly including voltage tunable varactor to enable center frequency tuning. However, Porambo et al. suggested such matching circuit having varactor to enable center frequency (fig. 3/no. 36 & 38, col. 4/ln. 54-col. 5/ln. 4). Therefore, it would have been obvious to one of ordinary skill in the art to provide such matching circuitry, as taught by Porambo et al., to the matching elements of Eidson et al. in order to effectively tuned to the desired frequency.

The modified communication of Eidson et al. and Porambo teach such varactor but not explicitly a dielectric varactor. However, such dielectric varactors are disclosed by Ala-Kojola (col. 2/ln. 1-7). Therefore, it would have been obvious to one of ordinary skill in the art to provide such dielectric varactors, as disclosed by Ala-Kojola, to the modified communication of Eidson et al. and Porambo in order to effectively tuned to the center frequency.

As per claims 2 and 17, the modified communication system of Eidson et al., Porambo et al., and Ala-Kojola further disclosed at least one additional inter-stage matching circuit (see Eidson et al., fig. 2/item Matching Elements).

As per claims 3 and 18, as stated above in claim 1, the modified communication system of Eidson et al., Porambo et al., and Ala-Kojola further disclosed at least one inter-stage matching circuit includes at least one tunable varactor to enable center

frequency tuning (see Eidson et al., fig. 2, see Porambo et al., fig. 3/no. 36 & 38, col. 4/ln. 54-col. 5/ln. 4).

As per claims 4 and 19, as stated above in claim 1, the modified communication system of Eidson et al., Porambo et al., and Ala-Kojola further disclosed at least one output matching circuit includes at least one tunable varactor to enable center frequency tuning (see Eidson et al., fig. 2, see Porambo et al., fig. 3/no. 36 & 38, col. 4/ln. 54-col. 5/ln. 4).

As per claims 5 and 20, the modified communication system of Eidson et al., Porambo et al., and Ala-Kojola further disclosed at least one additional inter-stage matching circuits is one additional inter-stage matching circuit (see Eidson et al., fig. 2/item Matching Elements).

As per claims 6 and 21, the modified communication system of Eidson et al., Porambo et al., and Ala-Kojola further disclosed at least one additional inter-stage matching circuit is two additional inter-stage matching circuits (see Eidson et al., fig. 2/item Matching Elements).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1 and 16 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §

706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-directauspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 30, 2006

**PABLO N. TRAN**  
**PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to be 'P. Tran', written over a rectangular stamp area.

A-2618